VAX/VMS
Systems Dispatch
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VAX/VMS SYSTEMS DISPATCH

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The **VAX/VMS Systems Dispatch** contains new and revised Software Product Descriptions, programming notes, software problems statements and responses. Much of the material is developed from Software Performance Report (SPR) answers significant to the general audience and is printed here to supplement the maintenance updates.

DECnet-VAX
DECtype/VMS
VAX ReGIS Graphics Library
RTEM-11
VAX Ada
VAX ADE
VAX BASIC
VAX BLISS
VAX C
VAX CDD
VAX COBOL
VAX CORAL-66
VAX DATATRIEVE
VAX DBMS
VAX DECalc
VAX DECOR
VAX DIBOL
VAX DSM
VAX
VAX FORTRAN
VAX MUX200
VAX PASCAL
VAX PL/I
VAX SPM
VAX TDMS
VAX 2780/3780 Protocol Emulator
VAX 3271 Protocol Emulator
FORTRAN IV/VAX to RSX (Cross Compiler)
VAX SORT/MERGE VAX
PDP DATATRIEVE/ VAX

DISTRIBUTION

The **VAX/VMS Systems Dispatch** is directed to one software contact for each software product. No mailing will be made to addresses without a software contact name. **Address change requests should be sent to the nearest DIGITAL field office. Include the new address and mailing label from the most recently received publication.**

Software binary and sources are provided under licenses only. The standard Terms and Conditions, OEM Agreement, and/or Quantity Discount Agreement contain the licenses for all binaries other than DECsystem-10.

Barbara Scollan, Associate Editor

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HELPFUL HINTS FOR WRITING SPRs

HINTS FOR WRITING SPRS

1.0 Introduction

Software Performance Reports (SPRs) exist to benefit customers as well as DIGITAL. They provide informaton to customers and feedback to DIGITAL about software problems.

The following descriptions provide guidelines for submitting information to DIGITAL so that SPR problems can be solved. Some information is common to all SPRs; other information is requested for only certain types of problems.

2.0 SPR Priority Levels

The following explanations of SPR priorities should be used as a guideline for determining the priority of an SPR. Please note that the priority determination should be based on the system or facility behavior that has actually been experienced at the site and should not be based on the perception of the impact of a potential problem.

Priority	Explanation
1.	MOST PRODUCTION WORK CANNOT BE RUN e.g., important production software is unusable, the system will not boot, necessary peripherals cannot be used as intended, no workaround exists.
2.	SOME PRODUCTION WORK CANNOT BE RUN e.g., certain functions or jobs are not usable, level of performance is not as expected or some documented feature does not work as expected but there is a workaround.
3.	ALL PRODUCTION WORK CAN BE RUN WITH SOME IMPACT ON USER e.g., significant manual intervention is required, performance has degraded but work can still be done.
4.	ALL PRODUCTION WORK CAN BE RUN WITH NO SIGNIFICANT IMPACT ON USER e.g., problem can be patched easily, simple bypass procedure exists.
5.	NO SYSTEM MODIFICATIONS NEEDED TO RETURN TO NORMAL PRODUCTION e.g., suggestion, consultation, documentation error or inquiry.

3.0 General Guidelines

This section covers the information that should be provided with all SPRs. Depending upon the problem, this information will vary in quantity and content. Remember that the more pertinent information that is included, the easier it is for DIGITAL to resolve the problem.

3.1 Scenario

A complete scenario should be supplied, usually in the form of a batch log console listing or SET HOST/LOG output file that shows exactly how the problem is produced. Supplying only the output produced by the problem is not enough. The entire scenario of what was done by the user is needed. The problem may be caused by an interaction between various system events, software packages, devices, SYSGEN parameters, DCL symbols or logical names. Some or all of the displays generated by the following commands may be required for different problems:

```
$ SHOW LOGICAL/ALL/FULL
$ SHOW SYMBOL/ALL/GLOBAL

$ RUN SYS$SYSTEM:SYSGEN
SYSGEN>  USE ACTIVE
SYSGEN>  SHOW/ALL
SYSGEN>  SHOW/SPECIAL
SYSGEN>  EXIT
```

3.2 Limit Problem Scope

As much as possible, eliminate all extraneous elements from the scenario. For example, if the execution of a very large program causes a problem, shorten the program to include only the code that causes the problem or write a small program that demonstrates the problem. This action has two benefits: first, logic errors may be discovered; second, the maintainer looking into the problem does not have to comprehend unnecessary material.

3.3 Machine-readable Files

If possible, supply any software needed to reproduce the problem. This may include source programs, image files, sample data, command procedures, logical names etc. If source programs are submitted, also include any libraries or require files referenced. These files must be provided in machine-readable format. Console medium or ANSI magtape are the best media to include with the SPR.

If the problem involves a system crash, include the system dump.

The data should be written to an ODS-2 format disk or an ANSI magtape. For example, the following commands will copy the system dump file to an ANSI magtape:

```
$ INIT MTA0: DUMPS
$ MOUNT/FOREIGN MTA0:
$ BACKUP/IGNORE=NOBACKUP SYS$SYSTEM:SYSDUMP.DMP -
_$ MTA0:DUMPS/SAVE
$ DISMOUNT MTA0:
```

NOTE

Since the system dump file is frequently marked NOBACKUP (telling the BACKUP utility to copy the file attributes but not its contents), the dump file be must copied with:

BACKUP/IGNORE=NOBACKUP

This will insure that the file contents are copied, as well as the file attributes. The commands used to write the media should also be provided with the SPR.

On a MicroVAX, where there is no console block storage device, use one of the floppy diskette drives to create machine-readable medium to be included with the SPR. The following commands can be used to copy files:

```
$ INIT  $FLOPPY1: SPRDATA
$ MOUNT  $FLOPPY1: SPRDATA
$ CREATE/DIRECTORY  $FLOPPY1:[DUMP]
$ BACKUP MYDATA.DAT,MYIMAGE.EXE  $FLOPPY1:[DUMP]SPRDATA/SAVE
$ DISMOUNT  $FLOPPY1:
```

On a full VAX, where there is a console block storage device, the following commands can be used to copy machine-readable data:

```
$ RUN SYS$SYSTEM:SYSGEN
SYSGEN>  CONNECT CONSOLE
SYSGEN>  EXIT
```

(At this time, remove the console medium and place a scratch volume in the console block storage device.)

```
$ INIT CSA1: SPRDATA
$ MOUNT CSA1: SPRDATA
$ CREATE/DIRECTORY CSA1:[DUMP]
$ BACKUP MYDATA.DAT,MYIMAGE.EXE CSA1:[DUMP]SPRDATA/SAVE
$ DISMOUNT CSA1:
```

It is important to use BACKUP to write the media submitted with an SPR. Transferring files in a save set produced by BACKUP is much more reliable than copying files to the media.

When machine-readable data is not provided in BACKUP save-set format, include the exact commands that were used to write the data and the commands used for reading it. Other formats are discouraged, since they may cause problems.

All machine-readable media submitted with SPRs will be returned to the customer.

3.4 System Environment

Every computer site runs a different type of workload. Some problems only appear under certain conditions. For example, some sites give different classes of users different base priorities. These sites may encounter problems that other sites do not. This information can be extremely important in resolving the problem, especially for system hangs or system crashes.

Describe any special software packages that are being used. Also, mention any foreign hardware devices or user-written drivers.

Software version numbers should be included. For example, if there is a problem with accessing local symbols during a DEBUG session, the version numbers of DEBUG and all relevant compilers/assemblers should be specified.

If any patches other than those from maintenance updates are being used, they should be mentioned in the SPR.

3.5 User Analysis (Optional)

Optionally, an analysis of the problem may be included. Any useful miscellaneous information should be included, such as, "Without xyz happening, the problem could not be reproduced" or "On version Vx.y, this problem does not occur."

4.0 Problem-specific Information to Include

Resolution of different classes of problems generally requires different kinds of additional information.

NOTE

For those items that are identified with a single asterisk (*), the raw data file (SYS$ERRLOG:ERRLOG.SYS), not the formatted output from the ANALYZE/ERROR utility, should be included. Formatted output frequently does not include all the information needed to resolve the problem.

For those items that are identified with a double asterisk (**), the raw data file (SYS$SYSTEM:SYSDUMP.DMP), not the formatted output from the SDA utility, should be included. Formatted output usually does not include all the information needed to resolve the problem.

Problem	Information to Include
System Bugcheck/Crash	A machine-readable copy of the system dump file must be included.** (Output from the SDA utility should not be sent since it usually does not include enough information to resolve the problem). A copy of the error log at the time of the error should also be included because many system problems are triggered by hardware errors.*
Machine-check:	On a machine check, include a machine-readable copy of the error log, not output from the error log generator.* A machine-readable copy of the system dump file should also be included. **
System Hang:	When a system appears "hung" (no response on any terminals), the system should be manually crashed and the system dump file included with the SPR. When the system is shut down in this way, the console listing is very important and should be included with the SPR. On VAX-11/730, VAX-11/780, VAX-11/782, VAX-11/785, and VAX 8600 primary console terminals, enter: (do nothing on the attached processor's console) ^P HALT @CRASH

On VAX-11/750 console terminal, enter:

```
^P
E P
E/I 0
E
E
E
E
D/G F FFFFFFFF
D P 1F0000
C
```

On MicroVAX I:

Push the HALT button on the front panel of the CPU box twice, so that the button is latched out (the red light in the center of the button is out).

Then, on the console terminal, enter:

```
E P
E/I 0
E +
E +
E +
E +
D/G F FFFFFFFF
D P 1F0000
C (Then wait a minute or so)
```

Note: If a CRT is being used, copy the displayed values from the examine commands to paper and submit them with the SPR.

On MicroVAX II:

Enable the HALT button via the switch on the back panel of the CPU box.

Push the HALT button on the front panel of the CPU box twice, so that the button is latched out (the red light in the center of the button is out).

Then, on the console terminal, enter:

```
E PSL
E/I 0
E +
E +
E +
E +
D PC FFFFFFFF
D PSL 1F0000
C (Then wait a minute or so)
```

Note: If a CRT is being used, copy the displayed values from the examine commands to paper and submit them with the SPR.

The preceding command sequences cause the VAX or MicroVAX system to bugcheck in a manner that is recognized by VMS developers as a forced crash.

Also include a description of the currently running workload.

VAXclusters:

If all machines in a VAXcluster are "hung" for a reason other than an explainable lack of quorum, a coordinated set of dumps plus console listings from all machines may be required for diagnosis. A coordinated set of dumps is a dump from every machine in the cluster taken in a way that ensures that the lock and other data structures are consistent between all dumps. To take a coordinated dump, first halt every VAX in the cluster. The last machine must be halted no more than 99 seconds after the first machine is halted. After all machines have been halted, crash each machine as directed under SYSTEM HANG, and provide all of the dumps and all of the console logs with your SPR.

Executive:

If it appears that there is a problem with the executive code, include the active values of the system parameters. These can be obtained by invoking SYSGEN and entering both the SHOW/ALL and SHOW/SPECIAL commands.

A machine-readable copy of the source program showing the problem plus libraries, require files, and build files should also be included, if possible.

Also include a copy of the machine-readable error log at the time of the problem. *

Devices:

For any suspected device or device driver error, include a copy of the error log at the time of the problem. *

Corrupted RMS Files:

When an RMS file becomes corrupted by software, an SPR should always be submitted. Items to include with the SPR are:

1) A copy of the corrupted file.

2) Any programs (preferably with sources) and data that are necessary to reproduce the corruption. Note the distinction between programs that merely demonstrate that the file is corrupt, as opposed to a program that causes the corruption to occur. Please try to trim down the program to isolate the specific operations that led to the corruption.

3) A description of how the file is being processed when the corruption occurs. For example, how many users are accessing the file, what kind of operations are being performed on the file ($UPDATEs, $PUTs, $DELETEs, etc.).

Sometimes accessing a corrupted file can cause nonfatal bugchecks. If it

appears that a process is continually disappearing from the system, check the error log for nonfatal bugchecks. If this is the case, include a crash dump with the SPR. To obtain a crash dump (assuming the system manager has given permission), perform the procedure below. Since this procedure will crash the system, it is suggested that it be performed during off-peak hours. Be sure to give adequate warning if there are any users on the system.

```
$ RUN SYS$SYSTEM:SYSGEN
SYSGEN>  USE ACTIVE
SYSGEN>  SET BUGCHECKFATAL 1
SYSGEN>  WRITE ACTIVE
SYSGEN>  EXIT
$ RUN PROGRAM_THAT_BUGCHECKS
```

Intermittent: For a problem that is intermittent or that is not reproducible, include a copy of the machine-readable error log at the time of the problem. *

Command Language Interpreters: When submitting an SPR on a command language interpreter, it is important to show all symbols and logical names defined on the system by using the following commands:

```
SHOW SYMBOL/ALL/GLOBAL
SHOW SYMBOL/ALL/LOCAL
SHOW LOGICAL/ALL/FULL
```

Also, indicate whether private or modified command tables are being used.

Job Controller: If the job controller process encounters a fatal error condition, it aborts execution and restarts itself (as a new process). Upon restart, the system job queue file is not reopened automatically; a START/QUEUE/MANAGER command and

appropriate START/QUEUE commands must be manually issued to restart batch and print processing for that node.

For this type of controller problem, include a copy of the console log error message and a machine-readable copy of the job controller process dump written by the system to SYS$SYSTEM:JOBCTL.DMP. In addition, if the START/QUEUE/MANAGER command fails because of a corrupted system job queue file, also include a machine-readable copy of the queue file. The default queue file name is SYS$SYSTEM:JBCSYSQUE.DAT.

Print Symbiont:

Print symbiont process dump:

If the print symbiont exits, a message from the job controller is printed on the console, together with an error message from the print symbiont. Also, a symbiont process dump is written to SYS$SYSTEM:PRTSMB.DMP. Include a copy of these console log messages and a machine-readable copy of the symbiont process dump. Also include copies of the displays:

```
SHOW QUEUE/FULL/ALL
SHOW PRINTER (for all
        printer execution queues)
SHOW QUEUE/FORM/FULL
SHOW TERMINAL (all terminal
        execution queues)
```

If a file was involved, include a DIRECTORY/FULL of the file and, if possible, a machine-readable copy of the file. If at all possible, attempt to explain the conditions which directly preceded the symbiont exit, such as commands used or attempted, and/or a detailed description of the symbiont behavior prior to exiting.

Unexpected format or output generated with print symbiont:

If the print symbiont problem exists in the formatting or output of data, include a machine-readable copy of the file and the library modules in use when printing.

Include a DIRECTORY/FULL display of the file and a copy of the displays using the following commands:

SHOW QUEUE/FULL/ALL
SHOW QUEUE/FORM/FULL
SHOW PRINTER and/or SHOW TERMINAL
(whichever is applicable)

Along with a description of the explicit PRINT command, include qualifiers and a copy of the FILE TRAILER page. Please provide all information required to reproduce the behavior consistently.

User-written and user-modified symbiont problems:

Describe the problem as completely as possible, including the intent of the user symbiont. Supply all details surrounding the problem and include a well-commented listing of the user-supplied symbiont or routine. If the problem is associated with the specification of the queue, form, characteristics, parameters, or other input to the DCL command line, include a log file or a description of the PRINT command which demonstrates the problem.

LIBRARIAN:

If there is a problem with the LIBRARIAN, include the following material:

1. A machine-readable copy of the library itself
2. Machine-readable copies of all input files to the library
3. Information (DIRECTORY/FULL) on the library file
4. Information (LIBRARY/LIST/FULL) on the library contents

If the problem can be duplicated at will, include the scenario and any command files used.

LINKER: If there is a problem with the LINKER, include machine-readable copies of the object files, shareable images, and libraries used in the link, along with a full map (LINK/MAP/FULL).

Debugger: Include sources, objects, and images for the program being debugged. If the program is large, it would be very helpful to reduce the size of the program to demonstrate the same problem. Also include a log of the debugging session and include the DEBUG.LOG file that the debugger produces.

DECnet: For a DECnet problem, supply configurations of the systems involved in the problem. This information should include the version numbers of the operating systems and DECnet, the hardware on both systems, and the patch level of the DECnet software on the non-VMS system, if applicable. Depending on the nature of the problem, it might also be applicable to supply hard-copy display of executor, line or circuit parameters and/or counters.

Terminals: If there is a problem with the terminal driver, provide the following information:

1. A list of terminal characteristics (SHOW TERMINAL)
2. The type of terminal
3. The type of modem (if any)
4. Any special front-end equipment
5. Any unusual terminal configuration

If the problem involves remote file access, it is often useful for the maintainer to know if the same or similar operation can be performed from a different account, or with the source and destination nodes reversed.

Compiler/Assembler: If there is a problem with the assembler or a compiler, include the source program that caused the problem. (It is very important to include all require files and libraries that are referenced by the source program).

It is especially important to limit the scope of the problem when submitting SPRs on compilers.

Include the version number of the compiler and the version number of the operating system.

NEWS BULLETIN

Seq. 1.1.4

Patch Kit Fails to Install After Version 4.2 Upgrade

Some customers received a patch kit with the response to their SPR. This patch was applied correctly to VAX/VMS Version 4.1. When they upgraded to Version 4.2, the patch was no longer present in SYS.EXE. The patch is not due to appear until Version 4.3. When the customer attempted to reapply the SPR patch kit to Version 4.2, VMSINSTAL failed with the error message:

```
%VMSINSTAL-E-VERSION, this kit must be -
    installed on an exisitng VMS 040 system
```

The problem that is described is a result of overly stringent version checking in the KITINSTAL.COM command procedure that is included as part of the patch kit. The easiest way to solve this problem is to modify the contents of the patch kit so that the patch can be applied to Version 4.2 systems. This can be done as follows:

Log in as the system manager and create a working directory for this operation.

```
$ CREATE /DIRECTORY [.SPRKIT]
```

Load the patch volume (floppy disk or TU58) into an available drive and mount it.

```
$ MOUNT device /OVERRIDE = IDENTIFICATION
```

Get the necessary files from the kit.

```
$ BACKUP /LOG device:[0,0]VMSSPR010.A -
  /SAVE_SET [.SPRKIT]
```

With your favorite text editor, edit the first line in the file called KITDATA.VUD,

from:

```
$          vms$version :== RELEASED,040
```

to:

```
$          vms$version :== RELEASED,042
```

Put the files back onto the patch kit.

```
$   BACKUP   /LOG   [.SPRKIT]*.*;0   device:[0,0]   -
     VMSSPR010.A /SAVE_SET
```

At this point, you can proceed with the installation of the patch using VMSINSTAL.

There is a shortcut to take, if you are so inclined. The important file contained on the patch kit is called SYS.VUP, a set of commands for the Patch Utility (PATCH). Skip the text edit step and the final BACKUP command, and directly patch SYS.EXE.

```
$ DEFINE /USER SYS$INPUT [.SPRKIT]SYS.VUP
$ PATCH SYS$SYSTEM:SYS.EXE /OUTPUT = SYS$SYSTEM -
     /JOURNAL = SYS$SYSTEM
```

This shortcut is a bit less formal than using VMSINSTAL but achieves the same result, as far as SYS.EXE is concerned.

Seq. 1.1.5

Problem in VAX/VMS DATA ENCRYPTION FACILITY

A problem in using the VAX/VMS DATA ENCRYPTION FACILITY Version 1.0 was recently discovered.

When encrypting a file, if the qualifier /ALGORITHM=DESCFB is used for key encryption, such as:

```
$ENCRYPT/ALGORITHM=DESCFB FILE_FOO.BAR KEY_X
```

an access violation occurs while decrypting the file using the same qualifier /ALGORITHM=DESCFB (which is required), such as:

```
$ DECRYPT/ALGORITHM=DESCFB FILE_FOO.BAR KEY_X
```

Therefore, files encrypted using this key encryption algorithm can not be encrypted again. It is important, in this case, to not use the /DELETE qualifier to delete your source for encryption. If the /DELETE qualifier is used, there is currently no way to decrypt the encrypted file to the original source!

WARNING

DO NOT USE THIS ALGORITHM AT ALL !

NOTE

All the other available algorithms can be used instead.

At this time, there is no patch. We are currently studying ways in which we can modify the code so that the /DELETE qualifier can be used during encryption.

KNOWN PROBLEMS AND RESPONSES

OPERATING SYSTEM: VAX/VMS V4.0 Seq. 5.20.15
PRODUCT: VAX/VMS
COMPONENT: SYS

Mailboxes and logical names

PROBLEM
STATEMENT

The DIGITAL-recommended method for maintaining upward compatibility from Version 3.0 to Version 4.0 when using temporary mailboxes, is to define the logical name table as follows:

```
DEFINE /TABLE=LNM$SYSTEM_DIRECTORY -
        LNM$TEMPORARY_MAILBOX -
        LNM$GROUP
```

This redirection is successful but can affect other software using temporary mailboxes. This occurs even if the other software is in other groups. It is probably because of the redefinition in the system logical name directory. Is it possible to ensure full Version 3.0 to Version 4.0 upward-compatibility for software?

RESPONSE

We are unsure what problems are caused by the redirection of LNM$TEMPORARY_MAILBOX on a system-wide basis, but here is a suggestion that might help avoid these problems.

Rather than altering the system-wide logical name table, place the redirected logical name in the process-private logical name table for each process that needs a group-wide temporary mailbox name. Thus, other users' logical name tables are not affected.

```
DEFINE /TABLE=LNM$PROCESS_DIRECTORY -
        LNM$TEMPORARY_MAILBOX -
        LNM$GROUP
```

In this way, applications that depend on mailbox names being accessible across a group can be made to work while other applications continue to run by placing temporary mailbox names into the job table.

Note that for some applications, it might be appropriate to place mailbox names into a table dedicated to the needs of a specific application. Also, any redirection of LNM$TEMPORARY_MAILBOX should include the /EXECUTIVE_MODE qualifier if the redirected name is to be used by images that are installed with privilege.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 10.5.3
PRODUCT: VAX/VMS
COMPONENT: ACCOUNTING

Image names not cleared in ACCOUNT/FULL

PROBLEM
STATEMENT

When using the Accounting Utility's (ACCOUNTING) /FULL qualifier, nonimage accounting records immediately following an image accounting record are sometimes displayed with the last image name.

RESPONSE

This behavior is a result of an error in the screen display optimization logic for the full display. We expect to correct this error in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.1 Seq.12.15.3
PRODUCT: VAX/VMS
COMPONENT: VMSINSTAL

VMSINSTAL OPTION G initializes incorrectly

PROBLEM
STATEMENT

During the processing of VMSINSTAL OPTION G, the answer to the prompt "Is it impossible to fulfill the request?" is ignored.

RESPONSE

We expect to correct this problem in a future update of VAX/VMS after Version 4.2.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 15.15.3
PRODUCT: VAX/VMS
COMPONENT: JOBCTL

No process slots causes JOBCTL to abort

PROBLEM
STATEMENT

If there are no more process slots available and the submission of a batch job is attempted, the job controller aborts and restarts itself.

RESPONSE

This problem was fixed in VAX/VMS Version 4.2.

A workaround is to increase the value of the SYSGEN parameter MAXPROCESSCNT.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 20.5.8
PRODUCT: VAX/VMS
COMPONENT: DCL

Data stream not treated as input data

PROBLEM
STATEMENT

Data streams following the $DECK command treat records whose syntax is that of a DCL label as labels, rather than as data.

RESPONSE

In data streams following the $DECK command, the GOTO command treats records whose syntax obeys that of a DCL label as labels, not as input data. We expect to correct this problem in a future update of VAX/VMS. DCL will ignore records between $DECK and $EOD, except as data.

OPERATING SYSTEM: VAX/VMS V4.2 Seq. 25.5.12
PRODUCT: VAX/VMS
COMPONENT: DECnet

ASYNCH line or circuit parameters vanish

PROBLEM
STATEMENT

VAX/VMS Version 4.2 has a problem with DECnet-VAX on asynchronous lines. The Network Control Program (NCP) line and circuit parameters are cleared from the volatile database without any external reason and without having the "switch" characteristic enabled.

RESPONSE

On a line with the switch parameter enabled, certain kinds of line or circuit failures cause DECnet to release the line back to the terminal driver and remove it from the volatile DECnet database. Occasionally, the state of the parameter is incorrectly reported, causing the database to be dissolved following a problem on the line (usually a noise or power interruption).

This problem is fixed in VAX/VMS Version 4.3.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 25.5.13
PRODUCT: VAX/VMS
COMPONENT: DECnet

Invalid alarm from DECnet

PROBLEM
STATEMENT

The DECnet router server's boot sequence causes an "Invalid security alarm" message to be returned.

RESPONSE

This problem was corrected in VAX/VMS Version 4.2.

OPERATING SYSTEM: VAX/VMS V4.2 Seq. 25.45.1
PRODUCT: VAX/VMS
COMPONENT: NCP

NCP SHOW KNOWN logging access violation

PROBLEM
STATEMENT

The Network Control Program (NCP) command SHOW KNOWN LOGGING fails as a result of an access violation if the output for one event class requires more than two lines.

RESPONSE

This problem will be corrected in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.2 Seq. 33.20.4
PRODUCT: VAX/VMS
COMPONENT: TTDRIVER

SET TERMINAL/INQUIRE on VT102

PROBLEM
STATEMENT

FMS cannot use a 132-column form on a Rainbow 100. As of VAX/VMS Version 4.2, the Rainbow responds like a VT102.

RESPONSE

There was an error in the Version 4.2 SET TERMINAL/INQUIRE command which caused the advanced video option not to be set for VT102-type terminals.

This will be corrected in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.0 Seq. 33.20.5
PRODUCT: VAX/VMS
COMPONENT: TTDRIVER

TT$M_MBXDSABL ignored

PROBLEM
STATEMENT

Terminal driver documentation in the VAX/VMS I/O User's Reference Manual, Volume I, states that the status SS$_ABORT is returned when carrier is lost on a modem line. However, the status returned is SS$_HANGUP.

RESPONSE

We will update our documentation to state that the status SS$_HANGUP is returned when carrier is lost.

OPERATING SYSTEM: VAX/VMS V4.0 Seq. 33.20.6
PRODUCT: VAX/VMS
COMPONENT: TTDRIVER

Status return from modem hangup

PROBLEM
STATEMENT

When the terminal characteristic TT$M_MBXDSABL is set, hangup notification should not be sent to the mailbox associated with the terminal. However, TT$M_MBXDSABL seems to be ignored and the message is still delivered.

RESPONSE

In a future update of VAX/VMS, the terminal driver will be fixed to check for the mailbox disabled characteristic.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 33.20.7
PRODUCT: VAX/VMS
COMPONENT: TTDRIVER

Extra characters with timeout READ

PROBLEM
STATEMENT

With the VAX/VMS Version 4.1 terminal driver, a read performed during an asynchronous write produces extra data on a DZ-11 terminal line.

RESPONSE

An error in the logic of TTDRIVER which handles reads with zero timeout caused the spurious characters to appear with the write operation.

This problem was corrected in VAX/VMS Version 4.2.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 33.20.8
PRODUCT: VAX/VMS
COMPONENT: TTDRIVER

READ/VERIFY with clear character from FMS

PROBLEM
STATEMENT

Specifying a picture string of 9B9B9B with a zero clear character and a blank fill character can produce incorrect results on the screen. The clear character appears where the fill character should be.

RESPONSE

Forms Management System (FMS) makes use of the read verify $QIO provided by the VMS terminal driver. Thus, the problem in FDV$GET is actually the result of a problem in the terminal driver.

We expect to correct this problem in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.0 Seq. 33.25.1
PRODUCT: VAX/VMS
COMPONENT: YCDRIVER

DMF32 requires carrier

PROBLEM
STATEMENT

The DMF32 controller has to see CARRIER before it passes data to a modem. This causes problems with most modem programs which expect to see a response from the modem indicating successful connection. Asserting CARRIER is not always possible because the process would not be terminated if the user lost the connection.

RESPONSE

This problem is a result of a limitation in the controller, rather than in software. Assuming that a change to the hardware is unlikely (although this suggestion will be passed on to the appropriate hardware group), there is a workaround in the software.

A modem program which does autodialing and then waits for a response from the modem typically times out if the response does not arrive. If a timeout occurs, the program should then check for CARRIER via the IO$_SENSEMODE!IO$M_RD_MODEM $QIO. If CARRIER is set, the program should report success and continue.

The autodial facility provided by SET HOST/DTE does not currently support autodialing with the DMF32. However, change the modem program used by SET HOST/DTE by specifying the MODEM_TYPE:modem-type qualifier and add the required code to the template program provided in SYS$EXAMPLES:DTE_DF03.MAR. More information on the SET HOST/DTE command can be found in the VAX/VMS DCL Dictionary.

We will consider including autodial support for the DMF32 in a future version of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 35.5.5
PRODUCT: VAX/VMS
COMPONENT: EDIT/ACL

Cursor position incorrect after line split

PROBLEM
STATEMENT

When editing an Access Control Entry (ACE) with the Access Control List (ACL) editor that spans multiple lines, inserting text that causes the line to split results in some strange behavior. The ACL editor splits the line and leaves the cursor position at the end of the next line segment.

RESPONSE

We expect to fix this problem in a future release of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 35.5.6
PRODUCT: VAX/VMS
COMPONENT: EDIT/ACL

Incorrect protection on journal file

PROBLEM
STATEMENT

If a privileged user is editing the Access Control List (ACL) of a file that he does not own, the journal file cannot be deleted because it is created with the PROTECTION: (S,O:RWED,G,W).

RESPONSE

We expect to fix this problem in a future release of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 40.2.1
PRODUCT: VAX/VMS
COMPONENT: ACL

Problems with XQP-generated ACE

PROBLEM
STATEMENT

When creating files in a directory, it is possible to have an Access Control Entry (ACE) appear twice in the file's Access Control List (ACL)--once with the NOPROPAGATE option and once without. This does not seem to be the correct thing to do.

In addition, it appears that the setting of the process default protection affects the protection allowed by the ACE added by the file system.

RESPONSE

The ACE added by the file system is included to ensure that, by default, the creator of the file always has control over the created file. This causes problems when an ACE propagated from the parent directory has the same list of identifiers as the ACE being added by the file system. The result is that the same ACE appears once with and once without the NOPROPAGATE option.

For newly created files, the protection allowed by the ACE and added by the file system is the same as that of the owner (for example, the protection from the OWNER portion of the standard "System, Owner, Group, World" protection with the addition of CONTROL access). This is done so that the creator of the file has the ability to access the file in the same ways as the owner of the file.

We will consider changing the behavior of the file system in a future release of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 40.2.2
PRODUCT: VAX/VMS
COMPONENT: EDIT/ACL

Error message positioning is incorrect

PROBLEM
STATEMENT

If the Access Control List (ACL) editor does not find a file, the error message is displayed in the middle of the screen, while the cursor remains positioned at the top of the screen.

RESPONSE

We expect to fix this problem in a future release of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 40.2.3
PRODUCT: VAX/VMS
COMPONENT: ACL

XQP-generated ACE not always added

PROBLEM
STATEMENT

The Access Control Entry (ACE) generated by the file system is not added to subsequent versions of the file, even when edited by the creator of the original file.

RESPONSE

This problem was corrected in VAX/VMS Version 4.2.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 40.45.17
PRODUCT: VAX/VMS
COMPONENT: APPEND

APPEND problem with RMS_EXTEND_SIZE

PROBLEM
STATEMENT

As part of a command procedure, several large files are appended prior to processing.

Under VAX/VMS Version 3.0, this procedure took about 30 minutes to complete. Under VAX/VMS Version 4.0, this same procedure takes about 3.5 hours to complete.

RESPONSE

This problem is a result of an incorrect assumption made by the Append Utility (APPEND). As a result of a change made to the default value of the SYSGEN parameter RMS_EXTEND_SIZE, this is viewed as a serious performance problem.

We expect to address this problem in a future release of VAX/VMS.

As a workaround, it is possible to boost the performance by setting RMS_EXTEND_SIZE to a suitably large value. (A good first start would be the value used in VAX/VMS Version 3.0 which is 80.)

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 55.10.12
PRODUCT: VAX/VMS
COMPONENT: AUTHORIZE

Login flag display truncated by AUTHORIZE

PROBLEM
STATEMENT

When almost all of the login flags are set, AUTHORIZE cuts the list short while doing a full display of the user's account.

RESPONSE

We expect to correct this problem in a future release of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 55.10.13
PRODUCT: VAX/VMS
COMPONENT: AUTHORIZE

Miscellaneous questions about identifiers

PROBLEM
STATEMENT

After setting up a project identifier and a directory, as described in the Guide to VAX/VMS System Security, several questions arise concerning the use of identifiers:

1. While CREATE and COPY have full access granted to the creator, EDT does not. Thus, new file versions cannot be deleted.

2. The normal file protection appears to have no effect.

3. The users holding the identifiers with the RESOURCE attribute cannot determine the quota used by the identifier.

RESPONSE

The answers to these inquiries are, respectively:

1. This problem was corrected in VAX/VMS Version 4.2.

2. The normal file protection applies only to the actual owner of the file and "system" users.

   The access available to the holders of the identifier must be specified in the Access Control Entry (ACE), using that identifier or the ACE added by the file system granting the same access as the actual owner of the file.

3. This problem was corrected in VAX/VMS Version 4.2.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 55.10.14
PRODUCT: VAX/VMS
COMPONENT: AUTHORIZE

MAIL record remains, user removed from UAF

PROBLEM
STATEMENT

When a record is removed from the User Authorization File (UAF), problems can occur in the Mail Utility (MAIL) if a new user is added with the same username.

In particular, the mail message count is not reset. This means that when the new user logs in, the user receives the "new mail" message.

RESPONSE

This problem is a result of changes made to the Authorize and Mail Utilities (AUTHORIZE, MAIL) for VAX/VMS Version 4.0. AUTHORIZE was changed so that it would no longer explicitly modify any of the information maintained by MAIL.

We will consider allowing some amount of interaction for a future release of VAX/VMS.

As a workaround, a command procedure is supplied that allows a privileged user to modify the Mail Utility's database SYS$SYSTEM:VMSMAIL.DAT. This command procedure is called:

SYS$EXAMPLES:MAILUAF.COM

The beginning of this command procedure contains a brief description of the available commands.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 55.20.9
PRODUCT: VAX/VMS
COMPONENT: BACKUP

Large ACLs cause BACKUP to ACCVIO

PROBLEM
STATEMENT

BACKUP aborts with an access violation when restoring files with extension headers and using the /VOLUME and /IMAGE qualifiers.

RESPONSE

We expect to correct this problem in a future release of VAX/VMS.

Since this problem appears in connection with the use of large ACLs, consider reducing the size of the ACLs by using group identifiers. (Not only does this avoid the BACKUP problem, but it also improves performance.)

To accomplish this, create an identifier to be granted to all users wishing access to the file (or files). Then, replace the large Access Control List (ACL) with a smaller one which has Access Control Entries (ACEs) that use the identifier just created.

OPERATING SYSTEM: VAX/VMS V4.0 Seq. 55.20.10
PRODUCT: VAX/VMS
COMPONENT: BACKUP

TMSCP-class tape cannot restart

PROBLEM
STATEMENT

When a parity error is detected on a TU-type drive and BACKUP detects the error, the operation is not restartable by the BACKUP RESTART option.

RESPONSE

The problem is that the tape class driver does not make the device available until an UNLOAD operation is performed. This is currently being corrected in two places. The first correction will be made in BACKUP, where the appropriate release will perform an UNLOAD operation on the tape before asking for a new one. The second correction will be made in the tape class driver to ensure that the tape drive is available when it should be. These corrections will be in a future update of VAX/VMS.

The problem also occurs if the operator mounts a write-locked tape when a write-enabled tape is requested by BACKUP. When the operator corrects the error by remounting a write-enabled tape, BACKUP repeatedly requests a write-enabled tape.

Until the problem is corrected, we suggest that you use the command SET MAGTAPE/UNLOAD from a privileged account. This ensures that the class driver is requested to make the tape unload in preparation for the next mount attempt.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 55.20.11
PRODUCT: VAX/VMS
COMPONENT: BACKUP

Enhance BACKUP to detect directory problems

PROBLEM
STATEMENT

When BACKUP saves a file that has the directory flag set in the file header, it renames the file to have a file type and version of ".DIR;1". Additionally, BACKUP does not save files from a directory file whose type and version are not ".DIR;1". BACKUP does not warn that it has encountered an invalid directory file (as ANALYZE/DISK does).

RESPONSE

It is possible to produce a directory file whose type and version number are different from ".DIR;1". While the path to this state is somewhat complicated, the result is a file which has the directory flag set in the file header. However, since the type and version are different from ".DIR;1", the file is not a valid directory file and is not recognized as such by either the file system or BACKUP.

ANALYZE/DISK is designed to find inconsistencies in the Files-11 disk structure. In doing so, it searches for files that are not included in any directory (and renames them to [SYSLOST]). It also issues a warning message if it finds a file which is flagged as a directory file but which has file type and version number different from ".DIR;1". That a file not named ".DIR;1" has contents similar in structure and nature to a real directory file is coincidental and of no consequence to the file system, except that ANALYZE/DISK flags the fact as a possible source of inconsistency in the disk contents.

That BACKUP changes the file name is an error in BACKUP which we will correct in a future update of VAX/VMS. Similarly, we will consider coding BACKUP to issue a warning message if it saves or restores a file which is flagged as a directory file but which is not of type and version ".DIR;1".

OPERATING SYSTEM: VAX/VMS V4.2 Seq. 55.50.6
PRODUCT: VAX/VMS
COMPONENT: DEBUG

Incorrect screen size in screen mode

PROBLEM
STATEMENT

The debugger handles screen mode improperly when SYS$INPUT points to the null device.

RESPONSE

This behavior is the result of the debugger taking the terminal characteristics of SYS$OUTPUT to determine information such as the terminal type and terminal screen size. Instead, the debugger should be referring to the terminal characteristics of DBG$OUTPUT.

In the case where SYS$OUTPUT is pointing to NL: (the null device) when screen mode is entered, the debugger reads an incorrect screen size of 60 x 132 and an incorrect device type of "unknown".

As a workaround, redirect SYS$OUTPUT to the terminal where the debugger is running. The debugger will collect the appropriate device information. For example, if the command "RUN/OUTPUT=TTA1:" is used instead of "RUN/OUTPUT=NL:", the debugger's screen mode works correctly.

To correct the errant behavior, the debugger must distinguish DBG$OUTPUT from SYS$OUTPUT.

We expect to fix this problem in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.2 Seq. 55.50.7
PRODUCT: VAX/VMS
COMPONENT: DEBUG

DECLARE command in C

PROBLEM
STATEMENT

Use of debugger's DECLARE command when language is set to C gives the following error message:

```
%DEBUG-W-INTERR, internal DEBUG error...
```

RESPONSE

This problem is a result of the logic in the debugger which is intended to support the case sensitivity of the C language. The problem does not exist in other languages. A possible workaround is to set language to something other than C temporarily. For example, create a file MY_DISP.COM as follows:

```
file MY_DISP.COM
----------------
SET LANGUAGE PASCAL
DECLARE P1:ADDRESS
EXAMINE P1:P1+100
SET LANGUAGE C
----------------
```

This will work provided the variables are entered in uppercase. For example, to display a variable TEST, enter:

```
DBG> DEFINE/COMMAND DIS = "@MY_DISP"
DBG> DIS TEST
```

If the variable "test" is entered in lowercase, the following construct will have to be used:

```
DBG> DIS %NAME'test'
```

When support for the C language was added, case sensitivity had to be accounted for (that is, ensure that "test" is found instead of "TEST" if the user entered it in lower case). Case sensitivity should have been accounted for in cases where parameters are passed to command procedures.

This will be fixed in a future release of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.2 Seq. 55.50.8
PRODUCT: VAX/VMS
COMPONENT: DEBUG

EVALUATE/HEXADECIMAL number in PL/I

PROBLEM
STATEMENT

In languages PL/I, COBOL, and RPG, the following debugger command does not work correctly:

```
DBG> EVALUATE/HEXADECIMAL 128
8C12
```

For other languages, the correct answer of 80 is produced.

RESPONSE

For PL/I, COBOL, and RPG, numeric constants, such as "128", are interpreted as packed decimal numbers. This is done to ensure correct expression evaluation and type conversion for these languages. In the above example, 8C12 is the hexadecimal value of the packed decimal representation of 128.

However, in a case such as "EVALUATE/HEXADECIMAL", the 128 should be treated as an integer and not as packed decimal data.

We expect to fix this for a future release of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 56.30.9
PRODUCT: VAX/VMS
COMPONENT: MAIL

MAIL allows bad forwarding address

PROBLEM
STATEMENT

The Mail Utility (MAIL) allows a user to set a forwarding address which has incorrect syntax.

RESPONSE

Unfortunately, it is impossible for MAIL to distinguish every valid syntax for a forwarding address since a legal forwarding string might contain an address on a foreign system.

OPERATING SYSTEM: VAX/VMS V4.2 Seq. 56.30.10
PRODUCT: VAX/VMS
COMPONENT: MAIL

MAIL scrolls incorrectly with long lines

PROBLEM
STATEMENT

If the lines of text of a mail message exceed the terminal width, part of the mail message scrolls off the screen.

RESPONSE

We will consider fixing this problem in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.0 Seq. 56.85.5
PRODUCT: VAX/VMS
COMPONENT: SHOW DEVICE

Define device as device

PROBLEM
STATEMENT

The DCL command SHOW DEVICE fails when given a logical name which translates to the same device name plus a colon. For example, DEFINE DUA0 DUA0: followed by SHOW DEVICE DUA0 returns a "No such device available" error message. This error occurs regardless of the translation attributes set up by the DEFINE command.

RESPONSE

Because of an error in the translation of logical names, the above example fails. This problem will be corrected in a future update of VAX/VMS after Version 4.4.

OPERATING SYSTEM: VAX/VMS V4.3 Seq. 56.85.6
PRODUCT: VAX/VMS
COMPONENT: SHOW

SHOW LOGICAL "" results in ACCVIO

PROBLEM
STATEMENT

The following command causes an access violation:

```
$ SHOW LOGICAL ""
```

RESPONSE

We expect to correct this problem in a future release of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 57.15.3
PRODUCT: VAX/VMS
COMPONENT: SUBMIT

SUBMIT/LOG_FILE command requires file-spec

PROBLEM
STATEMENT

The documentation states that the file specification on the LOG_FILE qualifier for the SUBMIT command is optional; however, DCL returns the error message:

```
%DCL-W-VALREQ, missing qualifier or keyword value
 supply all required values
```

when the following command is issued:

```
$SUBMIT/LOG_FILE
```

RESPONSE

We expect to fix this errant behavior in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.2 Seq. 65.5.25
PRODUCT: VAX/VMS
COMPONENT: DOCUMENTATION

Delta time documentation error

PROBLEM
STATEMENT

This documentation error occurs in the VAX/VMS DCL Dictionary, page DCL-28, Section 2.5.2, under the discussion of delta time. The first table under Section 2.5.2 shows the variable field "dddd" and its meaning. The second line in the table lists the variable field "Ah" and its explanation. However, this line in the table is incorrect. It should list the field "hh" instead.

RESPONSE

The documentation error will be corrected in the next revision of this manual.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 65.5.26
PRODUCT: VAX/VMS
COMPONENT: DOCUMENTATION

Incorrect ACP record attributes format

PROBLEM
STATEMENT

In the VAX/VMS I/O User's Reference Manual, Volume I, the diagram for the ACP-QIO record attributes area in Figure 1-7 specifies the first two word symbols as FAT$B_RTYPE and FAT$B_RATTRIB. However, Table 1-8 specifies the first two symbols as FAT$V_RTYPE and FAT$V_FILEORG. Indicate which one is correct.

RESPONSE

FAT$B_RTYPE refers to the actual byte; FAT$V_RTYPE refers to the subfield within the byte, as shown below:

FAT$B_RTYPE:

```
7                       4 3                         0
+-----------------------+---------------------------+
!                       !                           !
!    FAT$V_FILEORG      !        FAT$V_RTYPE        !
!                       !                           !
+-----------------------+---------------------------+
```

Figure 1-7 will be corrected in a future revision of the manual.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 65.5.27
PRODUCT: VAX/VMS
COMPONENT: DOCUMENTATION

SET FILE/NODIRECTORY incorrectly documented

PROBLEM
STATEMENT

The VAX/VMS DCL Dictionary, page DCL-578, describes SET FILE/NODIRECTORY incorrectly.

RESPONSE

The correct documentation is as follows:

> Specifying SET FILE/NODIRECTORY causes a specified file to be a nondirectory file. The qualifier /NODIRECTORY allows a corrupted directory file to be deleted, even if other files are contained in the directory. When a corrupted directory file is deleted, the files contained within it become lost. Use ANALYZE/DISK_STRUCTURE/REPAIR to place the lost files in [SYSLOST]. Then copy or rename the recovered files to a new directory.

The documentation was corrected in VAX/VMS Version 4.2.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 65.5.28
PRODUCT: VAX/VMS
COMPONENT: DOCUMENTATION

CTRL/V does not enable VT200 F6 key

PROBLEM
STATEMENT

The F6 key on the VT200 terminal is definable only if the terminal is set to "noline_editing". CTRL/V does not enable the F6 key.

RESPONSE

Issue the command SET TERMINAL/NOLINE_EDITING before defining the F6 key since CTRL/V does not enable the F6 key. This will be described in a future update of the VAX/VMS DCL Dictionary.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 65.5.29
PRODUCT: VAX/VMS
COMPONENT: DOCUMENTATION

DISMOUNT/ABORT fails with DEVALLOC

PROBLEM
STATEMENT

Attempting to dismount a magnetic tape that is mounted by another user with the DISMOUNT/ABORT command fails with the error message:

"DEVALLOC, device allocated to another user"

The process issuing the DISMOUNT command has VOLPRO privilege.

RESPONSE

When dismounting a volume, the process must assign a channel to the device. A process must have SHARE privilege to assign a channel to a device that is allocated to another process (in a different job tree). Since a magnetic tape is a nonshareable device, a process that has the magnetic tape mounted also has the device allocated.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 65.5.30
PRODUCT: VAX/VMS
COMPONENT: DOCUMENTATION

Erroneous /DEFAULT keyword value

PROBLEM
STATEMENT

There is a documentation inconsistency describing the /DEFAULT qualifier on the INITIALIZE/QUEUE, START/QUEUE, and SET/QUEUE commands. In the VAX/VMS DCL Dictionary, page DCL-624, the default keyword value for the BURST, FLAG, and TRAILER options is defined as being "ALL". In the Guide to VAX/VMS System Management and Daily Operations, page 9-27, the default keyword value is defined as being "ONE".

RESPONSE

There is an error in the documentation in the Guide to VAX/VMS System Management and Daily Operations, page 9-27.

The correct default keyword value is "ALL". This error will be corrected in a future revision of the manual.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 65.5.31
PRODUCT: VAX/VMS
COMPONENT: DOCUMENTATION

Privileges not required for logical I/O

PROBLEM
STATEMENT

The VAX/VMS I/O User's Reference Manual, Volume I, does not clearly indicate that privileges are not required to perform logical and virtual QIO requests to devices mounted /FOREIGN. However, to mount a device /FOREIGN might require VOLPRO privilege.

RESPONSE

The documentation will be corrected in a future release of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 65.5.32
PRODUCT: VAX/VMS
COMPONENT: DOCUMENTATION

DEFINE/FORM description documentation error

PROBLEM
STATEMENT

The last sentence on page DCL-230 of the VAX/VMS DCL Dictionary, fourth paragraph (for DEFINE/FORM), incorrectly reads:

> If you omit the /FORM qualifier from your PRINT command, your job will be printed using whatever form has been specified for the queue.

RESPONSE

The documentation has been corrected to read as follows:

> If you omit the /FORM qualifier from your PRINT command, your job will be printed using the default form definition.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 65.5.33
PRODUCT: VAX/VMS
COMPONENT: DOCUMENTATION

Incorrect FIB format

PROBLEM
STATEMENT

In the VAX/VMS I/O User's Reference Manual, Volume I, the File Information Block (FIB) format as shown in Figure 1-4 is incorrect. It reflects Version 3.0, instead of Version 4.0.

RESPONSE

The correct format, which is shown on the next page, will be included in a future revision of the documentation.

```
31          24 23        16 15           8 7          0
+-----------+-------------------------------------------+
!  FIB$B_   !                                           !
!  WSIZE    !            FIB$L_ACCTL                    !
+-----------+-------------------------------------------+
!                                                       !
+-----------------------+        FIB$W_FID              !
!                       !                               !
!       FIB$W_DID       +-------------------------------+
!                                                       !
+-------------------------------------------------------+
!                   FIB$L_WCC                           !
+-----------------------+-------------------------------+
!   FIB$W_CNTRLFUNC/    !                               !
!      FIB$W_EXCTL      !     FIB$W_NMCTL               !
+-----------------------+-------------------------------+
!           FIB$L_CNTRLVAL/FIB$L_EXSZ                   !
+-------------------------------------------------------+
!                    FIB$L_EXVBN                        !
+-----------------------+-------------+-------------+---+
!                       !   FIB$B_    !   FIB$B_    !   !
!                       !  ALALIGN    !   ALOPTS    !   !
!                       +-------------+-------------+---+
!                                                       !
+-------          FIB$W_ALLOC                   -------+
!                                                       !
+-----------------------+-------------------------------+
!      (reserved)       !     FIB$W_VERLIMIT            !
+-----------------------+-------------------------------+
!                   FIB$L_ACLCTX                        !
+-------------------------------------------------------+
!                FIB$L_ACL_STATUS                       !
+-------------------------------------------------------+
!                   FIB$L_STATUS                        !
+-------------------------------------------------------+
!                FIB$L_ALT_ACCESS                       !
+-------------------------------------------------------+
```

OPERATING SYSTEM: VAX/VMS V4.0 Seq. 65.5.34
PRODUCT: VAX/VMS
COMPONENT: DOCUMENTATION

Documentation error in code example

PROBLEM
STATEMENT

The example in the Guide to Using DCL and Command Procedures on VAX/VMS, page 6-7, is incorrect. INQUIRE RECORD should be replaced by INQUIRE NAME.

RESPONSE

The example will be corrected, in a future revision of the manual, as follows:

```
$ OPEN/WRITE OUTFILE DISK4:[MURPHY]NEW_STATS.DAT
$ INQUIRE NAME "Enter name"
$ WRITE OUTFILE NAME
.
.
.
```

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 65.5.35
PRODUCT: VAX/VMS
COMPONENT: DOCUMENTATION

Documentation and BACKUP /JOURNAL behavior

PROBLEM
STATEMENT

The documentation for the /JOURNAL qualifier for the Backup Utility (BACKUP) states that using this qualifier creates or appends information to a BACKUP journal file for either a SAVE or COPY operation. BACKUP does not perform journaling for COPY operations; BACKUP does perform journaling for SAVE operations.

There is confusion as to whether the utility or the documentation is incorrect.

RESPONSE

The documentation for BACKUP is incorrect. It is not intended that BACKUP should perform journaling on COPY operations.

We will correct the documentation for the /JOURNAL qualifier to BACKUP in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.2 Seq. 65.5.36
PRODUCT: VAX/VMS
COMPONENT: DOCUMENTATION

Incomplete HELP for * PRODUCT: prompt

PROBLEM
STATEMENT

The help provided by VMSINSTAL for the "* PRODUCT:" prompt does not include an explanation about how to exit from this query if there are no more products to be installed.

RESPONSE

A viable response is either CTRL/Z or EXIT.

This problem will be corrected in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.1 Seq. 65.5.37
PRODUCT: VAX/VMS
COMPONENT: DOCUMENTATION

Error in F$FAO lexical function

PROBLEM
STATEMENT

The F$FAO lexical function description in the VAX/VMS DCL Dictionary is incorrect. The repeat character directive is listed as !nc, when it should be !n*c.

RESPONSE

This documentation error will be corrected in the next printing of the VAX/VMS DCL Dictionary.

OPERATING SYSTEM: VAX/VMS V4.2 Seq. 65.5.38
PRODUCT: VAX/VMS
COMPONENT: DOCUMENTATION

NCP manual update instructions wrong

PROBLEM
STATEMENT

The instructions for the update to the VAX/VMS Network Control Program Reference Manual for Version 4.2 refer to pages NCP-121 and NCP-122. These pages are not included in the update package.

RESPONSE

The instructions should be ignored. There are no pages NCP-121 and NCP-122 in the Version 4.2 update. The updated manual contains all the information; nothing is missing.

CUMULATIVE INDEX

VAX/VMS SYSTEMS DISPATCH
CUMULATIVE INDEX FOR VAX/VMS V4.n
MARCH 1986

Following is a cumulative listing of articles for VAX/VMS V4.n and layered products.

The following list is designed so that in future issues it can be expanded. Consequently, there are several numbers "reserved" for that purpose. Also, within each category the numbering scheme allows for expanding the primary category to include related subsets. For example, under 55.0, Utilities, 55.35 is used for the COPY utility, 55.60 is used for the DIFFERENCES utility, etc. Periodically, the components list is reviewed to insure that it accommodates the current software needs.

R = indicates a republished article

Component/ Product	Sequence Number	Title of Article	Operating System	Mon/Yr
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SYSINIT	11.40.1	QUOTA CACHING DISABLED ON THE SYSTEM DISK	V4.0	Jul 85
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VMSINSTAL	12.15.1	VMIBCKERR.TMP INADVERTENTLY PLACED IN SAVE SET	V4.0	Jul 85
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	12.15.3	VMSINSTAL OPTION G INITIALIZES INCORRECTLY	V4.1	Mar 86
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	15.30.4	PRINT SYMBIONT ALLOCATES OUTPUT DEVICE	V4.0	Sep 85
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	15.30.13	SERIAL PRINTERS ON DMF DISCONNECT	V4.0	Sep 85
	15.30.14	PRINTER SUPPORT FOR ESCAPE SEQUENCE CHARACTER	V4.0	Jan 86
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	25.5.11	AREAS LEFT UNREACHABLE	V4.1	Jan 86
	25.5.12	ASYNCH LINE OR CIRCUIT PARAMETERS VANISH	V4.2	Mar 86
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	40.45.6	FILE CORRUPTION WITH GLOBAL BUFFERS	V4.0	Sep 85
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	40.45.9	REMOTE COMMAND PROCEDURES FAIL	V4.0	Sep 85
	40.45.10	VERSION 4 COPY WILL NOT COPY VERSION 3 ISAM FILES	V4.1	Sep 85
	40.45.11	RMS FILE PARSE PROBLEM WITH LEVEL 8 DIRECTORIES	V4.0	Sep 85
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DISK QUOTA	55.70.1	DISK QUOTA ERROR CAUSED BY OWNER PROPAGATION	V4.0	Nov 85
DUMP	55.85.1	PROBLEM WITH 8-BIT ASCII CHARACTERS ON PRINTERS	V4.1	Nov 85
EXCHANGE	55.90.1	RT-11 MAGNETIC TAPE SUPPORT	V4.1	Nov 85
	55.90.2	EXCHANGE DOES NOT HANDLE LONG RT-11 RECORDS	V4.1	Nov 85
	55.90.3	EXCHANGE PRODUCES INTERNAL LOGIC ERROR 175	V4.0	Jan 86
HELPTEXT	55.96.1	INCORRECT EXAMPLE OF MAIL COMMAND	V4.1	Nov 85

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	56.20.2	LINKER REJECTS VALID FILE NAMES IN OPTIONS FILES	V4.0	Jul 85
	56.20.3	VERSION 4.0 IMAGES LARGER THAN VERSION 3.0 IMAGES	V4.0	Sep 85
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	56.30.2	PRINTING IN MAIL IGNORES PAGE ATTRIBUTES	V4.0	Nov 85
	56.30.3	MAIL REPORTS INCORRECT ERROR ON LOCKED DISK	V4.1	Nov 85
	56.30.4	MAIL COMMAND COMPRESS DOES NOT RECLAIM SPACE	V4.1	Jan 86
	56.30.5	PROBLEMS WITH TERMINAL SET TO SCOPE/PAGE=0	V4.1	Jan 86
	56.30.6	MAIL SENDS RUNOFF OUTPUT FILES INCORRECTLY	V4.1	Jan 86
	56.30.7	MAIL ERROR SENDING NONSPAN FILES	V4.1	Jan 86
	56.30.8	PASSWORD OF ACCESS CONTROL STRING NOT MASKED	V4.0	Jan 86
	56.30.9	MAIL ALLOWS BAD FORWARDING ADDRESS	V4.1	Mar 86
	56.30.10	MAIL SCROLLS INCORRECTLY WITH LONG LINES	V4.2	Mar 86
MONITOR	56.40.1	FOREIGN TERMINAL SUPPORT DOES NOT WORK	V4.0	Sep 85
	56.40.2	MONITOR'S VIRTUAL MEMORY USAGE GROWS CONTINUOUSLY	V4.0	Sep 85
PURGE	56.52.1	PURGE CAN INCORRECTLY DELETE FILES	V4.0	Sep 85
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	56.80.2	VOLUME RETENTION DATES OVERRIDE SET FILE DATES	V4.0	Sep 85
	56.80.3	SET PASSWORD ALWAYS RETURNS SUCCESS STATUS	V4.1	Sep 85
	56.80.4	PROBLEM WITH SET VERIFY IN BATCH JOBS	V4.0	Nov 85
	56.80.5	SET TERMINAL/INQUIRE PROBLEM ON VT55	V4.0	Nov 85
	56.80.6	SET ACL DOES NOT SELECT FILES	V4.1	Jan 86
	56.80.7	SET VOLUME/DATA_CHECK IGNORES KEYWORD	V4.1	Jan 86
SHOW	56.85.1	CNX_STATE DOCUMENTATION ERROR	V4.1	Sep 85
	56.85.2	SHOW KEY COMMAND DISPLAYS NCORRECT ECHO STATE	V4.0	Nov 85
	56.85.3	RANDOM BROADCAST CLASSES DISABLED	V4.0	Nov 85 R
	56.85.4	BASE PRIORITY WRONG IN SHOW PROCESS/CONTINUOUS	V4.0	Jan 86
	56.85.5	DEFINE DEVICE AS DEVICE	V4.0	Mar 86
	56.85.6	SHOW LOGICAL "" RESULTS IN ACCVIO	V4.3	Mar 86
SHUTDOWN	56.90.1	SHUTDOWN$INFORM_NODES USAGE DESCRIBED	V4.0	Sep 85
	56.90.2	TIME-OF-YEAR CLOCK CAUSES SHUTDOWN ERROR	V4.0	Sep 85
	56.90.3	SHUTDOWN DOES NOT DETECT AMBIGUOUS OPTIONS	V4.0	Nov 85
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	57.10.3	SPAWN/INPUT DOES NOT WORK WITH A SEARCH LIST	V4.1	Nov 85

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	57.15.2	SUBMIT A,B CAUSES ACCESS VIOLATION	V4.1	Jan 86
	57.15.3	SUBMIT/LOG_FILE COMMAND REQUIRES FILE-SPEC	V4.1	Mar 86
	60.0	VAXcluster-RELATED ARTICLES		
CNXMAN	60.5.1	INVALID DATA READ FROM QUORUM DISK ON UDA	V4.1	Nov 85
	60.5.2	TEMPORARY LOSS OF QUORUM IN CLUSTER	V4.0	Nov 85
	60.5.3	CONCEPT OF QUORUM IN A VAXCLUSTER	V4.n	Jan 86
	62.0	VERSION 4 ENHANCEMENTS SECTION		
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	62.5.2	ENHANCEMENTS AND FIXES IN VERSION 4.0 RMS	V4.0	Nov 85
	65.0	DOCUMENTATION SECTION		
DOCUMENTATION	65.5.1	SYS$TRNLNM EXAMPLE IS INCORRECT	V4.0	Jul 85
	65.5.2	SNDOPR SYMBOLIC CODE INCORRECT	V4.0	Jul 85
	65.5.3	UNDOCUMENTED ERROR MESSAGE FOR MOUNT	V4.0	Jul 85
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SOFTWARE PROBLEMS OR ENHANCEMENTS

Questions, problems, and enhancements to DIGITAL software should be reported on a Software Performance Report (SPR) form and mailed to the SPR Center at one of the following Digital Offices: *(SPR forms are available from the SPR Center).*

Areas Covered	SPR Center
United States; remainder of Far East, Middle East, Africa Latin America	Corporate Administrative Services Group P.O. Box F Maynard, MA 01754
Canada	Digital Equipment of Canada, Ltd. P.O. Box 13000 Kanata, Ontario Canada, K2K 2A6
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China	Digital Computer Hong Kong Ltd. 1303-1309 Dominian Ctr. 43-59 Queen's Road East Wanchai Hong Kong

DIGITAL SOFTWARE LICENSING

digital

DATA SHEET

This data sheet explains what software licenses are and why customers must obtain a software license to run any item of DIGITAL proprietary software.

DIGITAL does not sell software; DIGITAL offers software under a license agreement. DIGITAL has a license agreement for source software and object software. Since DIGITAL software programs are made available primarily in object code, this data sheet focuses on the purchase of object programs.

Introduction to Software Licensing

When DIGITAL hardware is purchased, all rights of ownership (legally called "title") to the hardware pass to the customer. This is not the case with software. DIGITAL regards software as proprietary information. Since software is easily reproduced, it must be legally protected from improper copying. Therefore, DIGITAL uses a combination of trade secret and copyright legal protection for software. DIGITAL protects its investment by retaining title to its software at all times and requires anyone wishing to use it to obtain a license.

How DIGITAL Licenses Software

The license agreement for object programs is contained in DIGITAL's standard Terms and Conditions of Sale and Corporate Volume Purchase Agreements instead of as a separate agreement. Therefore, when software products are purchased under DIGITAL's Terms of Sale, the software license agreement is made at the same time.

Key Principles of the License Agreement

Object code is licensed for single use. This means obtaining a license for a product allows the associated software to be used on the "single" CPU on which it was first installed. Other key points are as follows:

- If the licensed CPU temporarily malfunctions, the software may be run on another machine while the CPU is down.
- Copies of the software may be made for backup purposes if appropriate proprietary and copyright notices are included.
- The software may be modified or merged with other software if appropriate proprietary and copyright notices are included.
- The software may be used by the customer's employees and its agents directly concerned with the internal use, but may not be made available to anyone else.

Modification to the Software Product

Any modification to licensed software does not exempt the product from DIGITAL license terms. Every line of code from a software product falls under the terms of the license. Only those modifications that are not part of the original software are the customer's property. It is important to note that warranty on the product is limited to the original software supplied by DIGITAL.

Transferability of Licensed Software Products

License Transfer - A license agreement does not automatically allow transfer of licensed software to another party or another CPU. If the customer intends to sell the licensed CPU and pass on the software with the sale or move the software onto another CPU, permission must be obtained from DIGITAL. A case-by-case License Transfer is required to relicense the software.

Software Sublicensing - DIGITAL customers with a purchase agreement authorizing sublicensing, such as OEMs, may transfer licensed object products to their customers without a License Transfer. A valid sublicense, executed by an OEM with its customer, gives the OEM's customer the same license rights and responsibilities as a license agreement made directly with DIGITAL.

Source Software

Sources are only available for selected products. A license agreement for source software must be separately executed for each facility/location which intends to purchase sources in machine-readable, listing, or microfiche form. Further information and availability of sources can be found in the applicable Software Product Description (SPD).

Software Warranty

Each licensed software product offered has an SPD describing the warranty commitment for the product. Software products under DIGITAL warranty must conform to the description provided for a 90-day period, which generally begins upon product installation or 30 days after delivery. All other products are provided AS IS, without warranty. The SPD clearly states under which warranty category the product falls.

Purchasing the License for the Software Product

A license must be obtained for each CPU on which the licensed software will be used (unless otherwise specified by DIGITAL).

A Single-use License for object code is generally ordered according to the type/classifcation of the CPU or system configuration intended to run the product. Further information and availability can be found in the applicable SPD.

Software Product

A license is a prerequisite to purchase the associated software. The Media and Documentation Option for a product is ordered according to media type. Further information and availability of media can be found in the applicable SPD.

Purchasing Software Product Revisions/Updated Versions

If a licensed customer is not covered by a product service agreement, updated versions can be purchased when they are made generally available. Updated versions are ordered according to media type. A customer can also choose to run updated versions on additional CPUs, but not purchase multiple media distributions. If this is the case, the Software Revision Right-to-Copy option must be purchased for each CPU which runs the updated version.

Software Product Services

A licensed customer can purchase annual product service agreements to receive updated versions on media when available. A customer may choose to copy updated versions onto additional CPUs during this service agreement period. In this case, the software Service Right-to-Copy must be purchased for each CPU which runs the updated version. Further information and availability can be found in the applicable SPD. Your local DIGITAL office can be contacted for additional assistance.

DIGITAL EQUIPMENT COMPUTER USERS SOCIETY

BENEFITS OF BELONGING

The Digital Equipment Computer Users Society (DECUS) is one of the largest and most respected users groups in the computer industry today. Membership in DECUS, which is free and voluntary, provides the individual user with information and services not found anywhere else.

DECUS provides an environment where users of Digital Equipment Corporation products can share information with other users and with DIGITAL. Members can find out the latest news on DIGITAL's hardware, software, and educational products. The feedback exchange with DIGITAL allows the users of DIGITAL's products to have a voice in the company's future.

Founded in 1961, DECUS now has three autonomous areas worldwide - DECUS U.S., DECUS Europe, made up of eight independent chapters, and DECUS GIA (General International Area), made up of four independent chapters. DECUS services and activities are shared between these chapters through mutual agreements.

All DECUS services promote the exchange of information in a noncommercial environment. Included in these services are:

Special Interest Groups (SIGs)

These groups, formed around an area of common interest, exist for a variety of hardware, operating systems, languages, applications, and marketing areas. Participation in these groups allows fellow users to exchange information and share technical expertise in the areas of most interest to the users.

Local Users Groups (LUGs) and National Users Groups (NUGs)

LUGs and NUGs are licensed groups of individuals who gather to share information with other users on a periodic basis. Not only do they have common professional interest, but they also have geographic and cultural ties. DIGITAL representatives attending these meetings often unveil new products and services and supply updates on existing policies and procedures.

Symposia

DECUS holds symposia each year in the different chapters, two per year in the U.S. These meetings provide a unique opportunity for users with a wide spectrum of experience to meet for up to five days of intensive technical exchange. Symposium activities include workshops, clinics, panels, tutorials, and formal paper presentations. DIGITAL participates in symposia by sending Product Group managers and developers to discuss strategies, products, problems, and solutions.

Publications

The flow of information among users, as well as between users and DIGITAL, is the primary goal of DECUS. Various publications generated by DECUS support this communication. They include chapter newsletters and *The Proceedings*, a technical volume published after each symposium. DECUS also publishes Special Interest Groups' newsletters that provide information pertaining to specific DIGITAL products.

Program Library

The DECUS Program Library is the main vehicle for the exchange of software among users of all DIGITAL systems. The Library contains over 1000 software programs written and voluntarily submitted by users. These programs include compilers, editors, utilities, numerical and statistical functions, as well as games and graphic routines. The Library publishes an annual software catalog that lists and describes all the DECUS programs available to all users for a minimal charge.

You are cordially invited to join over 60,000 other users of DIGITAL products around the world and begin to share your experiences, both successes and problems.

For more information, contact the appropriate DECUS chapter office listed here.

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